

REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

Claims 1-8 and 10-21 are pending in this application. Claims 1 and 8 are currently amended. Claims 19-21 are newly added. No claims are cancelled. For the reasons stated below, Applicants respectfully submit that all claims pending in this application are in condition for allowance.

Claim Rejections

Claims 1-8, and 10-18 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,446,369 to Byrne *et al.* ("Byrne") in view of U.S. Patent No. 5,859,537 to Davis *et al.* ("Davis"). Although Applicants disagree with this rejection, independent claims 1 and 8 have been amended to more particularly point out what Applicants consider to be the invention. Accordingly, this rejection is traversed at least because Byrne and Davis do not teach all of the features of the claimed invention.

Independent claim 1 has been amended to recite, among other things, "enabling adjustment of a timing of a predetermined maintenance schedule based on the correlated amount of corrosion." Independent claim 8 includes similar subject matter, among other things. In an exemplary embodiment, a calculated amount of corrosion may be correlated with a number of days that previously scheduled maintenance should be delayed. *See* the specification at paragraph [0025].

The Examiner acknowledges that Byrne does not teach correlating the amount of corrosion with a maintenance schedule for the piece of equipment. The 10/12/2005 Office

Action at pages 4-6. The Examiner alleges that Davis suggests an “as required” maintenance schedule for a piece of equipment to allow performance of repairs to a piece of equipment before it becomes too costly to perform them at col. 1, lines 15-32 and col. 3, lines 15-49. *See id.* Based on the teachings of Davis, the Examiner contends that it would have been obvious to modify Byrne by using the corrosion monitoring of Byrne to obtain an “as required” maintenance schedule. However, Davis does not teach or suggest that obtaining an “as required” maintenance schedule would include adjusting the timing of previously scheduled maintenance. For at least this reason, the rejection of claims 1 and 8 should be withdrawn.

Claims 2-7 and 10-21 depend from corresponding ones of independent claims 1 and 8, and therefore, are allowable based on their dependency as well as for the features that they add to the independent claims.

Dependant claims 4, 12, and 13

For example, with respect to dependent claims 4, 12, and 13, claim 4 recites, *inter alia*, “wherein the amount of corrosion is compared to an expected amount of corrosion, and a resulting comparison result of the amount of corrosion and the expected amount of corrosion is used to determine the maintenance schedule for the equipment.” Claims 12 and 13 include similar subject matter, among other things. In an exemplary embodiment, a calculated amount of corrosion may be compared with a value of corrosion that is determined via a look-up table that uses measured temperature and/or humidity information of the working environment to generate an expected amount of corrosion. *See* the specification at paragraph [0023].

The Examiner asserts that Byrne teaches comparing expected levels of corrosion severity of the material being monitored when located in different environments including different temperature and humidity conditions at col. 15, line 56-col. 16, line 16. *See* the 10/12/2005

Office Action at page 4. However, the cited portion of Byrne is drawn to a description of tests (*i.e.*, instances in which the coupon was not installed in a working environment to detect corrosion of a piece of equipment) that were performed on the coupon of Byrne using an automated environmental chamber that was calibrated to alternate cycles of high humidity-hot air and low humidity-hot air at predetermined humidity and temperature conditions. Byrne at col. 16, lines 4-9. The testing was done in a test environment to ensure that the described coupon would work properly when installed for normal use within different environments. *Id.* Thus, it is irrelevant whether the passage relied upon by the Examiner actually teaches comparing expected levels of corrosion severity, since the passage only describes a testing method that does not apply to instances in which the coupon is monitoring corrosion of a piece of equipment in an environment in which the piece of equipment is located, as is required by the claim. In other words, Byrne does not teach or suggest making such a comparison outside of the described testing environment. Davis does not address this deficiency of Byrne. For at least this reason, the rejection of claims 4, 12, and 13 is improper and should be withdrawn.

Dependant claims 5-7 and 14-16

With respect to claims 5-7 and 14-16, claim 5 recites, *inter alia*, “wherein determining the amount of corrosion experienced by the metallic element is validated based on conditions of the environment.” Claims 6, 7, and 14-16 include similar subject matter, among other things. In an exemplary embodiment, a calculated amount of corrosion may be compared with a value of corrosion that is determined via a look-up table that uses measure temperature and/or humidity information of the working environment to generate an expected amount of corrosion. Based on the comparison, the calculated value of corrosion may be used or ignored. *See* the specification at paragraph [0023].

The Examiner admits that neither Byrne nor Davis describe validating a determined corrosion amount based on conditions of the environment. *See* the 10/12/2005 Office Action at pages 5 and 6. Modification of the cited references to include this feature would be proper “*only* if there is some suggestion or incentive to do so.” *In re Sang Su Lee*, 277 F.3d 1338, 61 U.S.P.Q.2d 1430 (Fed.Cir. 2002) (emphasis in the original) (quoting *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) (quoting *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984))). The Examiner alleges that it would have been obvious to modify Byrne and Davis to validate the amount of corrosion measured “based upon conditions of the environment since Byrne teaches that temperature and humidity conditions cause certain levels of corrosion to a metal object, thus affecting the overall corrosion rate of the object.” *Id.* This is improper because the teaching that temperature and humidity effect corrosion in Byrne does not suggest the desirability of validating a measured amount of corrosion based on conditions of the environment. *See In re Dance*, 160 F.3d 1339, 48 USPQ2d 1635 (Fed. Cir. 1998). Such a teaching is not only absent in Byrne, but is also not present elsewhere in the cited art. For at least this reason, the rejection of claims 5-7 and 14-16 should be withdrawn.

Newly Added Claims

Claims 19, 20, and 21 are newly added. Claim 19 depends from independent claim 8, and therefore, is patentable over the cited references based on its dependency as well as for the features that it adds to claim 8. Independent claim 20 recites, *inter alia*, wherein determining the amount of corrosion experienced by the metallic element is validated based on conditions of the environment. Independent claim 21 includes similar subject matter, among other things. For at

least the reasons addressed above with respect to claims 5-7 and 14-16, this feature is not disclosed, taught or suggested by the cited references. Accordingly, claims 20 and 21 are allowable over the cited references.

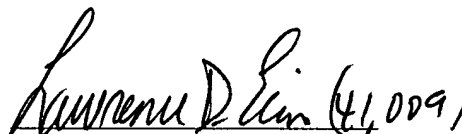
In view of the foregoing, all of the claims in this case are believed to be in condition for allowance. Should the Examiner have any questions or determine that any further action is desirable to place this application in even better condition for issue, the Examiner is encouraged to telephone Applicants' undersigned representative at the number listed below.

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Respectfully submitted,

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